DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP-0134(6) Dougherty
P. I. No.: 450540
Clark Avenue Extension over the Flint River

OFFICE: Engineering Services

DATE: March 5, 2008

FROM: Brian Summers, P.E., Project Review Engineer

TO: Ben Buchan, P.E. State Urban Design Engineer

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
BRIDGE (BR)				
BR-1	Use a 6' median with a positive barrier	$55,729	No	Would require that an attenuator be installed in the median to protect the end of the Barrier Wall which is not desirable. Would also limit Emergency Vehicle access across the bridge.
BR-3	Use combined 10' pedestrian/bike lane shoulder	$2,297,766 (proposed) $4,223,106 (actual)	Yes	This has been modified to remove the Bike Lanes from the bridge and roadway. In addition, the median on the bridge has been revised to 6' for a total bridge width reduction of 10'.
BR-4	Provide one 8' bike lane and one 6' sidewalk	$2,916,033	No	This no longer applies since the Bike Lanes have been removed.
BR-5	Use 10' pedestrian/bike lane with a delineator in between	$2,215,299	No	This no longer applies since the Bike Lanes have been removed.

ALT No.	Description	Savings PW & LCC	Implement	Comments
BRIDGE (BR) - continued				
BR-6	Construct bike and pedestrian lane/trail at grade with separate bridge	$5,081,674	No	This no longer applies since the Bike Lanes have been removed.
BR-7	Construct separate bike/pedestrian bridge	$2,140,686	No	This no longer applies since the Bike Lanes have been removed.
BR-8	Reduce 8' median to a 4' raised to a 4'' flush striped median	$1,493,168	No	Cost savings of going to a 6' median (2' raised) is included in BR-3.
BR-12	Use MSE Walled Abutments and reduce end spans	$658,756	No	The Bridge Office does not want to use MSE Walls at the abutments in the floodplain of the Flint River because of concerns with the MSE Walls being vulnerable to undermining in a flood event.
BR-13	Re-align to the northeast; use embankment in Zone "X"	$4,168,373	No	This VE Alternative is not feasible due to topographic constraints such as the drainage canal that drains into the Flint River, which must be avoided. The wetlands and floodplain would also have to be either filled or bridged which would increase the environmental impacts.
BR-14	Re-align roadway along the abandoned railroad northwest of the apartment complex	$4,868,589	No	This VE Alternative is not feasible due to topographic constraints such as the drainage canal that drains into the Flint River, which must be avoided. The wetlands and floodplain would also have to be either filled or bridged which would increase the environmental impacts.
BR-17	Lower bridge profile after crossing the railroad	$972,702	No	Access to the flood control valves located along a service road below the bridge has to be maintained as well as an adequate vertical clearance to allow construction equipment to pass under the bridge.

ALT No.	Description	Savings PW & LCC	Implement	Comments
ROADWAY (RD)				
RD-1	Use 11' lanes	$1,758,273	Yes	This also includes savings for using 11' lanes across the bridge.
RD-2	Use a 12' shoulder	$93,632	Yes	This should be done.
RD-4	Move bike lanes and combine with sidewalk to make a multi-use trail	$186,469	No	This no longer applies since the Bike Lanes have been removed.
RD-5	Move bike lane to shoulder adjacent to sidewalk	$215,698	No	This no longer applies since the Bike Lanes have been removed.
RD-6	Re-align Merritt and Line Streets	Design Suggestion	No	This work is beyond the scope of this project and would increase the cost significantly.
RD-8	Close access to Village Street	Design Suggestion	Yes	This should be done.
RD-9	Consider the use of "Eyebrows" at Merritt, Maple, and Blaylock Streets	Design Suggestion	Yes	This should be done.

NOTE: It should be pointed out that the Project Manager took some of the recommendations from the Value Engineering Study and enhanced them even further for more savings than was proposed. Specifically, the Bike Lanes have been removed from the roadway as well as the bridge. In addition, the median width on the roadway has been revised to 16' (12' raised) and the median width on the bridge has been revised to 6' (2' raised). These suggestions weren't specifically mentioned in the VE Alternatives but the estimates have been modified to include these cost savings.

A meeting was held on February 26, 2008 to discuss the above recommendations. Albert Shelby and Amos Jenkins, Jr. with Urban Design, and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance.

Additional information was provided by the Design Office on March 4, 2008.

Approved: Dalem Ross **Date:** 4/4/08

Gerald M. Ross, P. E., Chief Engineer

Attachments

c: Gus Shanine
Todd Long
James Magnus
Darrell Richardson
Albert Shelby
Amos Jenkins, Jr.
Peter Eze
Paul Liles
Bill Ingalsbe
Bill Duvall
Irene Bellinfante
Joe Cowan
Amber Perkins
Ken Werho
Nabil Raad
Kristy Langdon
Lisa Myers

PRECONSTRUCTION STATUS REPORT

PROJ ID	COUNTY	DESCRIPTION	MGMT. ROW DATE	SCHED DATE	MGMT. LET DATE
450540-	Dougherty	CLARKE AVE EXT FM JEFFERSON @ W SOCIETY TO CLARKE @ MAPLE	Mar-09	Aug-10	Mar-11

STP00-0134-00(006) **FIELD DIST:** 4
TIP #: H/R-95-8 **TWIN:** **US:**
MPO: Albany **EST DATE:** 2/11/08
MODEL YR:
PROJ MGR: Shelby, Albert **PROJ LENGTH:** 2.75
PROG TYPE: Reconstruction/Rehabilitation **TYPE WORK:** Widening
CONCEPT: AN5U(MED 16) **LET RESP:** DOT Congressional Districts: 2

Phase	Approved	Proposed	Cost	Fund	Status
PE	1998	1998	1,429,142.00	Q20	AUTHORIZED
ROW	2009	2009	9,001,000.00	L200	PRECST
CST	LR	LR	107,125,992.74	L200	PRECST

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACT/EST FINISH	PCT	DISTRICT COMMENTS
		Define Project Concept	4/30/98	12/14/03	92	PE PROJ NO: PESTP013400006 (1)
		Concept Meeting	5/23/02	5/23/02	100	CITY SIGNED PFA 11-09-07
		Concept Submittal and Review	11/10/03	12/14/03	100	
		Receive Preconstruction Concept Approval	12/1/03	12/14/03	100	
		Management Concept Approval Complete	**9/11/03**	**9/11/03**	**100**	
4/16/08	4/22/08	Value Engineering Study	9/7/06		83	
		Public Information Open House Held	7/17/02	7/17/02	100	
4/11/08	5/11/09	Environmental Approval			5	
1/19/09	1/19/09	Public Hearing Held			0	
		Mapping	6/12/00	6/27/00	100	
		Field Surveys/SDE	10/19/00	11/14/02	100	
2/2/09	**1/30/09**	**Preliminary Plans**	**6/16/03**		**39**	
4/11/08	4/11/08	Preliminary Bridge Design	11/5/07		90	
4/16/08	4/15/08	Underground Storage Tanks	1/12/04		60	
8/18/08	1/2/09	404 Permit Obtainment			0	
6/2/09	6/2/09	PFPR Inspection			0	
7/8/09	8/18/09	R/W Plans Preparation			0	
10/14/09	**10/19/09**	**R/W Plans Final Approval**			**0**	
7/8/09	7/10/09	L & D Report Development and Approval			0	
10/20/09	1/5/10	R/W Acquisition			0	
7/18/08	7/31/08	Stake R/W			0	
		Soil Survey	2/28/06	5/24/06	100	
7/8/09	8/12/09	Bridge Foundation Investigation			0	
7/13/09	**3/22/10**	**Final Design**			**0**	
8/11/09	11/30/09	Final Bridge Plans Preparation			0	
4/13/10	4/13/10	FFPR Inspection			0	
4/27/10	5/10/10	FFPR Response			0	

BIKE PROVISIONS INCLUDED?: Y **MEASUREMENT** E **CONSULTANT:** N **UT EST:** $ 0.00

PDD: LOCALS MAY WANT TO CHANGE SCOPE. 3/30/99. Flint River bridge 4/26/01. Prelim Plans. 3/4/04, 10/6/04.
Bridge: STB 11/01/07
Design: AAJ: see district comments
EIS: EA/notOnSchRow/11-28-07/PERKINS
LGPA: REV PFA SGN (L) ALBANY DO UTILITIES 11-15-07.
Planning: Clarke Ave. extension fm Jefferson @ W Society to Clark @ Maple is on the DARTS 2025 Transportation Plan (1999) see map
Prog. Develop: LE IS FOR 20% OF SIDEWALK COST PER CT 2-15-99
Programming: PR2/P=8-14-97/#1 3-01/#2 11-06
Traffic Op: CCB/KWL RCVD REQUEST FOR S&M/SGNLS 10-25-07 $+
UST: 4 SITES TO OMR 1-12-04 / 15 SITES TO OMR 4-19-04
Utility: MPLANS TO DZN 08/05
EMG: 2036 (H85(94)-W/V88)

R/W INFORMATION:
PREL PARCEL CT: 124 **TOTAL PARCEL CT:** **ACQUIRED BY:** LOC **ACQ MGR:** Robbins, Donnie (LOC)
UNDER-REVIEW CT: **RELEASED** **OPT-PEND CT:** **DEEDS CT:** **COND-PEND CT:** **COND-FILED CT:**
RW CERT DT: **ACQUIRED CT:** **RELOCATION CT:**

Wishon, Ron

From: Jenkins Jr., Amos
Sent: Tuesday, March 04, 2008 11:46 AM
To: Wishon, Ron
Cc: Shelby, Albert
Subject: FW: STP-0134(6) Dougherty Co., Clarke Ave. Ext. over The Flint River, PI# 450540

Ron,

See below for Bridge's response to using MSE walls on the Clarke Ave extension bridge spans.

Amos A. Jenkins Jr.
Urban Design - Group 6
Voice: (404) 656-5440
Fax:(404) 657-7921

From: Beck, Susan
Sent: Tuesday, March 04, 2008 11:35 AM
To: 'John McWhorter'; Sean Garland; Garrick L. Edwards; Jenkins Jr., Amos
Cc: Robbie Frizzell
Subject: RE: STP-0134(6) Dougherty Co., Clarke Ave. Ext. over The Flint River, PI# 450540

John,
The Bridge Office does not recommend using MSE walls at the abutments in the floodplain of the Flint River due to the fact that the 1994 flood was in excess of a 100 year storm. The current elevation of the toes of the endrolls is below or close to the flood of record elevation of 193.1 which occurred at the railroad crossing. Using shorter spans at the ends would only move the proposed toes of the walls to a lower elevation and allow them to be more vulnerable to undermining.

Susan T. Beck
Office of Bridge Hydraulics
(404) 656-5285
sbeck@dot.ga.gov

From: John McWhorter [mailto:jmcwhorter@JBTrimble.com]
Sent: Tuesday, March 04, 2008 11:17 AM
To: Sean Garland; Garrick L. Edwards
Cc: Beck, Susan; Robbie Frizzell
Subject: FW: STP-0134(6) Dougherty Co., Clarke Ave. Ext. over The Flint River, PI# 450540

fyi....

From: Jenkins Jr., Amos [mailto:ajenkins@dot.ga.gov]
Sent: Tuesday, March 04, 2008 11:07 AM
To: John McWhorter
Subject: RE: STP-0134(6) Dougherty Co., Clarke Ave. Ext. over The Flint River, PI# 450540

John,

I don't see a problem with the clearance you've outlined.

Amos A. Jenkins Jr.
Urban Design - Group 6
Voice: (404) 656-5440
Fax:(404) 657-7921

From: John McWhorter [mailto:jmcwhorter@JBTrimble.com]
Sent: Tuesday, March 04, 2008 10:48 AM
To: Jenkins Jr., Amos
Cc: Sean Garland; Garrick L. Edwards; Robbie Frizzell; Beck, Susan
Subject: RE: STP-0134(6) Dougherty Co., Clarke Ave. Ext. over The Flint River, PI# 450540

Amos,

We are in the process of addressing the VE comments pertaining to the end spans of the proposed bridge. On the east end, there is a service drive located parallel to the canal. We need to propose some horizontal clearance criteria between the intermediate bent on the canal bank and the toe of the proposed fill. We are considering 8' from the column face to a 12' lane and 2' of clearance to the toe for a total clear distance from the column face to toe of 22 ft. If you concur, we will use this to minimize the end span. Please advise.

Thanks,

John

From: Jenkins Jr., Amos [mailto:ajenkins@dot.ga.gov]
Sent: Monday, March 03, 2008 10:28 AM
To: John McWhorter
Subject: RE: STP-0134(6) Dougherty Co., Clarke Ave. Ext. over The Flint River, PI# 450540

John,

I've attached the VE Study. If you have any questions please let me know.

Amos A. Jenkins Jr.
Urban Design - Group 6
Voice: (404) 656-5440
Fax:(404) 657-7921

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

MEETING SUMMARY

FILE	STP-0134(6) Dougherty County Clarke Avenue Extension from SR9/Jefferson Street To SR3/Liberty Expressway P.I. No. 450540	**OFFICE**	Urban Design
		DATE	August 24, 2006

LOCATION: Urban Design conference room B

ATTENDEES: Albert Shelby-GDOT, Urban Design; Amos Jenkins Jr. - GDOT, Urban Design; John McWhorter – JB Trimble; Mike Davis– JB Trimble; Bill DuVall - GDOT, Bridge Design; Ted Cashin - GDOT, Bridge Design; Leisa Jones - GDOT, Urban Design; Susan Beck - GDOT, Bridge Design;

COPIES: Darrell Richardson, GDOT

SUBJECT: Discussion of Bridge issues for STP-0134(6), P.I. # 450540 Clarke Avenue Extension from SR9/Jefferson Street to SR3/Liberty Expressway

DISCUSSION:

- **Urban Design** will complete the deed research on the canal on the eastside of the river for ownership and discuss clearance space under bridge when the owner is found.
    - Tell John McWhorter (JBT) the results of discussion.
      The locals saw no problem with current alignment so long as access to the flood control valves and sanitary sewer is maintained. Rod Hutchinson said that the max desirable clearance for the boom trucks needed to access the flood control devices was about 20 feet.
      Urban Design was to look into alignment and grade changes to completely avoid both the flood control devices and sanitary sewer.
    - Will we have to remove the structure? No we will not, we will shift the alignment away from this structure.
    - Alignment change may be needed. The alignment has been changed, approved by Albert Shelby and sent to John McWhorter of JBT

BR-17 →

- **Urban Design** will get written verification from the railroad companies on the rail lines that are to be taken out of service and get their opinion about the clearance above the remaining rail lines. Letter giving written verification on rail line closures, produced.
- **Urban Design** will call OEL for status of wetland and endangered species. Special studies have yet to be started.
    - Get district survey to delineate aforementioned wetlands and endangered species on layout. Special studies have yet to be started.
- Urban Design will revise the bridge typical section to show the sidewalk widths at 6'. Will be shown in a forthcoming Revised Concept Report letter.
- A revised schedule may be necessary to complete the bridge for Right-of-Way.

Transcribed by: Amos Jenkins Jr.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE STP-0134(6), Dougherty County
Clark Avenue Extension from Jefferson Street
to Liberty Expressway
P.I. Number 450540

OFFICE Urban Design

DATE February 1, 2008

FROM James B. Buchan, P.E., State Urban Design Engineer

TO Brian Summers, P.E., State Review Engineer

SUBJECT Value Engineering Study Report Responses

This office has received and reviewed the Value Engineering Study Final Report received by the Office of Urban Design on December 14, 2007. The study developed fifteen alternative ideas and three design suggestions. Additionally, Urban Design recommends that the bridge typical section be changed from the current proposed configuration of 8' median (4'raised), 12' travel lanes (two in each direction) 4' bike lanes and 6' sidewalk to 6' median (2' raised) 11' travel lanes (two in each direction) and 6' sidewalks. Urban Design also recommends that the roadway typical section be changed from the current proposed configuration of a 20' median (16' raised), 12' travel lanes (two in each direction), 4' foot bike lanes and 5' sidewalks to a 16' median (12' raised), 11' travel lanes (two in each direction) and 5' sidewalks. The following are the alternatives and design suggestions with Urban Design's recommendations for each.

BR-1: Use a 6' median with a positive barrier. This alternative introduces a possible obstruction into the roadway and is prohibitive to emergency vehicle access. This alternative is not recommended and will not be implemented as a part of this project.

BR-2: Use 11' lanes. Reduction of travel lane width from 12' to 11' would reduce the amount of full-depth paving and required right-of-way needed. This design alternative is recommended and will be implemented as a part of this project.

BR-3: Use 10' combined pedestrian/bike lane shoulder. A flush pedestrian/bike path/lane would leave no refuge for pedestrians. Additionally, bikes are considered vehicles and as such should not be combined with pedestrians. This design alternative is not recommended as a part of this project.

BR-4 Provide 1-8' bike lane and 1-6' sidewalk. Bikes are considered vehicles that flow in the direction of traffic. Bike lanes that traverse both directions of travel are desirable. This design alternative is not recommended as a part of this project.

BR-5: Use a 10' pedestrian/bike lane with delineator in between. The delineator between the bikes and pedestrians introduces a hazard onto the roadway. Additionally, delineators tend to "hold" road debris rather than direct it off the travel-way, causing a build-up in the bike lane. This design alternative is not recommended as a part of this project.

BR-6: Construct bike and pedestrian lane/trail at grade with separate bridge. One of the purposes for this project, as outlined in the approved concept report, is to construct a river crossing that would allow traffic (vehicular, pedestrian and cyclist) access to emergency services on the west side of the Flint River in the event of a major flood. Building an at grade bike and pedestrian lane/trail and bridge would defeat the purpose of the project primarily because pedestrians and cyclists would be forced onto a bridge that has no provisions for them in the event of a major flood. This design alternative is not recommended and will not be implemented as a part of this project.

BR-7: Construct separate bike pedestrian bridge. Construction of a separate bike/pedestrian bridge at the same elevation as the proposed mainline bridge that would be necessary to achieve the need and purpose of the project (see BR-6 response) would be as expensive as keeping the facilities on the mainline bridge. A separate facility also introduces additional bents in the environmentally sensitive floodplain and channel of the Flint River, causing additional environmental impacts. This design alternative is not recommended and will not be implemented as a part of this project.

BR-8: Reduce 8' median with 4' raised to a 4' flush striped median. This alternative has minimal cost savings as the bridge width will not change. The concrete median is the only bridge quantity that would change. A raised median is preferred with a bridge of this length to separate traffic directions. Urban Design will minimize the median to a 6' median (2' raised). This design alternative is not recommended and will not be implemented as a part of this project.

BR-12: Use MSE walled abutments and reduce end spans. This alternate will be discussed with Bridge Design since the bridge plans have not been finalized. This design alternative is a contingent recommendation from this office.

BR-13: Re-align to the northeast; use embankment in zone "x". This alternative is not feasible due to topographic constraints such as the drainage canal that extends off the end of West Society Street that drains into the Flint River that must be avoided. The wetlands and floodplain would also need to be either filled or bridged making this alternative not feasible environmentally. A major geometric constraint is keeping the bridge bents from impacting the drainage canal. The proposed alternative would require a reverse curve onto the bridge itself. This design alternative is not recommended and will not be implemented as a part of this project.

RR-14: Re-align roadway along the abandoned railroad northwest of the apartment complex. This design alternative is addressed with the response to BR-13. This design alternative is not recommended and will not be implemented as a part of this project.

BR-17: Lower bridge profile after crossing the railroad. The profile on the bridge at the east end must accommodate service vehicle traffic under the last span which prevents any significant profile reduction in this area. The profile as proposed prevents low points from being located on the bridge. In addition, the desirable minimum grade of 0.5% for drainage is maintained, which is of particular concern given the length of the bridge. Any significant profile reduction would compromise one or more of the aforementioned design goals and is not recommended.

RD-1: Use 11' lanes. Reduction of travel lane width from 12' to 11' would reduce the amount of full-depth paving and required Right-of-Way needed. This design alternative is recommended and will be implemented as a part of this project.

RD-2: Use 12' shoulders. Reduction of roadway footprint width would reduce the amount of potential Right-of-Way, Environmental, Environmental Justice and Historical impacts. This design alternative is recommended and will be implemented as a part of this project.

RD-4: Move bike lane and combine with sidewalk to make a multi-use trail. A multi-use trail is usually reserved for areas where existing roads are not present. Bikes are typically considered vehicles where roads are present. Mixing bikes with pedestrians is not desirable. This design alternative is not recommended and will not be implemented as a part of this project.

RD-5: Move bike lane to shoulder adjacent to sidewalk. This alternative was addressed in RD-4. This design alternative is not recommended and will not be implemented as a part of this project.

RD-6: Re-align Merritt and Line Streets. This work is outside the scope of this project. Merritt Street is being cul-de-saced, but no other roadway work is being done on Merritt or Lines Streets. This design alternative is not recommended and will not be implemented as a part of this project.

RD-8: Close access to Village Street. The benefits of closing Village Street have been reviewed. This design alternative is recommended and will be implemented as a part of this project.

RD-9: Use of 'eyebrows' at Merritt, Maple and Blaylock Streets. This design suggestion is recommended and will be implemented as a part of this project.

JBB: ajj AVS

Cc: Paul Liles, Bridge Design
John McWhorter, JB Trimble